

Support For
sinclair
ZX81 - spectrum - QL

and

TIMEX/sinclair

1000 - 1500 - 2068

computers

TIMELINEZ

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COLOR PLOTTING ON THE 2068 A HARDWARE INTERFACE FOR THE COMMODORE 1520

A review by P.Fischer

The color image you see was produced on a Commodore 1520 Printer/Plotter as interfaced to the 2068. The interface required comes from John McMichael in Wyoming. Other reviews have appeared on this system, but I always felt, "you gotta SEE it to really understand!"

This system is for people who are looking for an inexpensive way to produce hardcopy color graphics on the 2068.

The interface is, at it's minimum, a simple board that is intended to plug into an Oliger Expansion Board. But it is also easy to make it plug directly onto the computer by soldering on the appropriate connector.(or John will, for a small fee).It also comes bundled with a software patch that allows you to drive the plotter from BASIC.

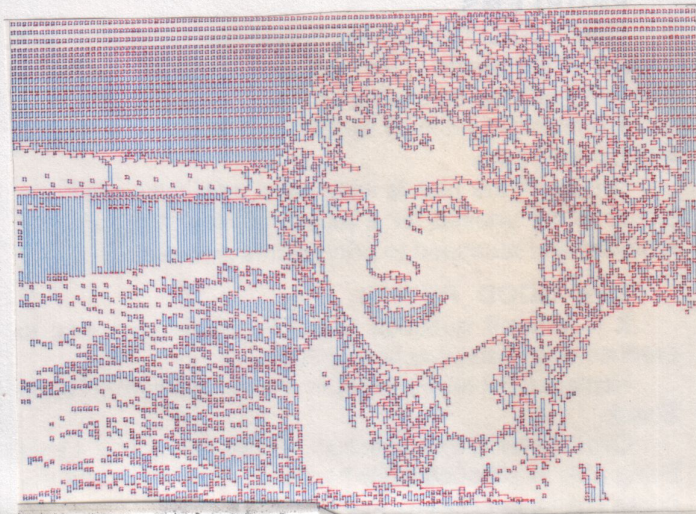
There are also several additional pieces of software available to compliment this system. The two I ordered were PIC-PLOT and SCREEN-TO-PLOTTER. The former simply allows you to load a SCREEN\$ and plot it in one or two colors (2 different sizes). The second allows you to control the plotter mechanism with a joystick or trackball in "real time". You can also load a SCREEN\$ first, then just "trace over" that image. Using this program you can change colors whenever you want. The moves are automatically stored in RAM. When finished you can SAVE these moves to tape for later re-loading and re-plotting so you can make as many copies as you like.

As you can see, the lines drawn by the 1520 are quite fine. This, I feel, is one of it's most impressive features. No other device for the 2068 matches this sharpness, as far as I know.

The screen you see was produced by PIC-PLOT, and this is the largest size available. There is another size, about 1/4 of this. So the 1520 obviously does not compete with a commercial plotter by any means. But the price is right; \$30 for the plotter itself, and about as much for the interface. The two mentioned programs are \$9 each. A recent development is that the same interface will also drive an OKIMATE 20 color printer, more on this later.

But the 1520 is a wonder unto itself. It's 6x11x 3" and the mechanism is a bit larger than a cigarette pack. John analyzed it, even went out and bought a VIC 20 to see how it was intended to work. It contains it's own ROM which gives it a larger array of functions even without the 2 special programs I got.

I used it mostly with PIC-PLOT (the easiest),you just load in a SCREEN, pick a size, pick the color or colors (red, blue, green or black) and the software does the rest.



The results are mixed. Some plots are spectacular, others only mud. But it's all worth it for the spectacular ones. After a while, you begin to have a feel for which ones most likely will work and which won't. There's a direct correlation with the complexity of the image. The more complex, the more likely the "mud" effect. Also, in the large size PIC- PLOT printout, shadows come out as white, confusing the image.

The time to plot also varies by complexity. Simple images can take as little as 7 minutes. The longest one took slightly over an hour. Obviously you can't stand there and watch it, you have to do something else while it plots.

The biggest problem with this plotter is availability. They haven't been manufactured for some time, so it's necessary to find the plotter FIRST, and THEN order the interface. Possible sources include Commodore users who are selling out their entire systems or perhaps by contacting a Commodore User Group. I bought mine, some time back, from TOYS-R-US. They at one time had 50,000 of them, but appear to have sold out. It's worth a phonecall, however, if there's a store local to you.

The second program I tested was the SCREEN-TO-PLOTTER software, and I liked it. It requires a bit of "eye-hand" coordination to work. No effortless plots here. The basic principle here is that you have a Joystick or (in my case) a trackball and the plotter running. You can move the cursor anywhere on the screen, and then hit enter the plotter will immediately draw the same line on the paper. Move the cursor again, and repeat the process. Each

move is stored in ram and can be re-run for multiple copies. My first attempt was a house on a hill with the sun setting behind it. The house and hill were easy, but when I tried to draw a believable sun, I fell on my face. I had to draw a circle on a piece of clear plastic, tape the plastic to the screen and then trace it. The didn't work either because my monitor horizontal to vertical ratio was different than the plotter. But I fixed that because my monitor has controls to adjust both. The next time, it worked fine. But it's a slow process. If all goes well, however, the results are rewarding. It strikes me particularly intriguing to do one of these, save the data to tape (or disk) and send it to a friend and let him watch it plot before his own eyes.

PROBLEMS

The PIC-PLOT program "trims" the two sides and bottom of the image. This can sometimes cause minor problems with the resultant plot.

The mechanism itself is delicate and must be treated with extreme care.

The ink in the nibs is watercolor, and dries out if the plotter is left unused for a period of time. They can be removed and recapped to prevent this problem

THE GOOD POINTS

It is without question the least expensive way to produce color hardcopy from a 2068.

Replacement nibs and paper are available from Radio Shack.

Overall I feel it's an excellent buy for the money. I love being able to produce color hardcopy, and these are the prices I came to Timex for in the first place.

WISH LIST

I wish I could plot a picture using PIC-PLOT and then load SCREEN-TO-PLOTTER and "touch-up" the picture I just plotted. Currently you can't do this since both the termination of PIC-PLOT and the initialization of SCREEN-TO-PLOTTER advance the paper feed on the 1520.

I wish the 1520 screen matched the 2068 screen so that it wouldn't "clip off" the edges.

I wish I could refill the pen nibs with other colors of ink.

I wish that when PIC-PLOT drew the horizontal lines that it started at the top of the image rather than at the bottom. This would allow me to see the image as it's being produced rather than waiting till it's done.

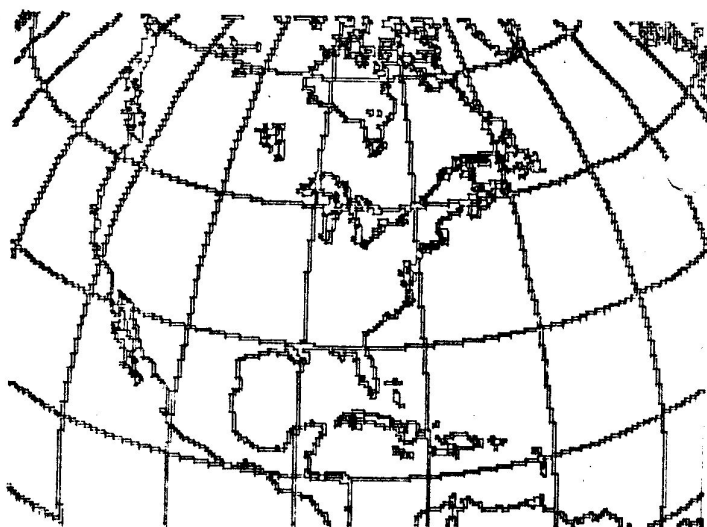
The hardware portion of this system is available in the Oliger tradition, i.e., bareboard (\$15), bareboard with parts (\$21) and fully assembled (\$30), but it's a very simple configuration with only 4 IC's much like an Oliger Parallel printer interface.

Incidentally, there are 200 copies of Timelinez this time around, each one has a different plot on it. So if you know anyone else who gets Timelinez, you can see a different example.

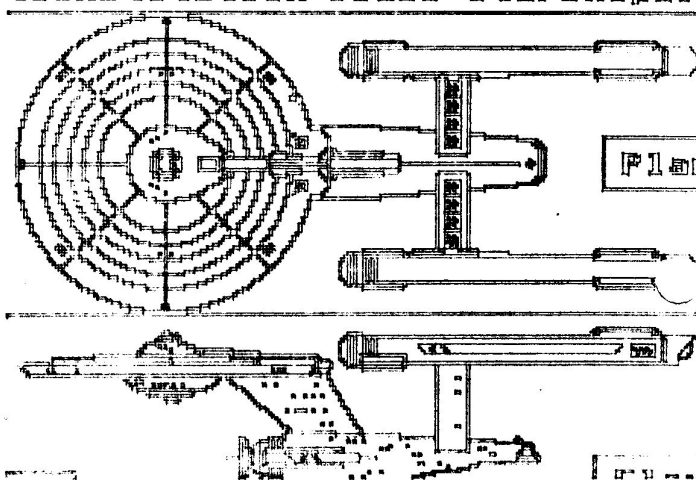
NEW FEATURE

John Discovered that the same interface can also be used to drive an OKIMATE 20 color printer. This printer is very much still in production, albeit slightly more expensive. I haven't gotten one of these, but the sample I saw really impressed me.

For more information, send a S.A.S.E. to John McMichael/1710 Palmer Dr/Laramie, WY 82070.



(Constitution Class Starships)



TT **TIME**
II **EX**
MM **sinclair**
EE **user group**
LL **News-Magazine**
II **-T/S-PUG**
NN **-T/S-SUU**
EE **-S/T-EBZUG**
ZZ **-TCWT/S_SIG**
 -TAS-BAM, Inc.

FRONT

PAGE

PRINTED USING
sinclair QL
PROFESSIONAL
COMPUTER AND
THIS PROGRAM.

DESK-TOP PUBLISHING
FOR THE SINCLAIR QL

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Issues 1/88 - present,
 contact your editor at
American Micro.

The PDSE Library is
 now available to all;
 covering T/S1000-1500,
 T/S 2068, Spectrum and
 the QL.
 Contact **American Micro**
 for further details.

S . N . U . G . MEMOGRAM

When the first news release was sent out in late March, we weren't sure what would happen. As the June 30, 1988 deadline approached, we received approximately 75 cards and letters with an additional 10 phone calls. We were very surprised to hear that we were being discussed in other parts of the world. A letter was sent from Down Under - all the way from Australia. Some of the letters were what we were looking for... opinions as to what people were looking for in an organization of this type. Every single correspondence was in the affirmative - not one had anything to disagree with. The need and desire for an organization such as this is there.

At a meeting of former Winterfest '88 officials, the following was decided on:

1. S.N.U.G. would be a reality
2. The purpose of S.N.U.G. is to act as facilitator between Users Groups and Sinclair users. We want to act as the single source to look to for information about Sinclair and to direct inquiries to the proper sources. Some of the ways to accomplish this purpose is with goals such as the ones listed below. We would have this information on file for distribution.
 - a) Sinclair Oriented Users Groups
 - b) Current and active list of Vendors
 - c) Names and addresses of Sinclair Users (with permission!)
 - d) Accurate and up to date listing of Sinclair specific BBS's
 - e) Public Domain Software Library (PDSL)
 - f) Newsletter and Document Library (NDL)
 - g) Establish a database of known hardware and software problems with available cures
3. General elections for officers would take place in January, 1989.

4. Dues Structure:

\$ 12.00 Individual Membership
\$ 15.00 User Group Membership

5. Membership:

We are targeting Users Groups and for those not associated with a U.G., they may have membership-at-large status.

Initial membership needed - One Hundred (100) memberships between 9/1/88 and 1/1/89 to help to defray start up costs. To be successful, a minimum membership of Three Hundred (300) needed by 6/1/89.

At this point we want to point out we are not in competition with currently established Users groups. The idea has been and always will be to support these groups and not detract from them. They are the backbone of the community. We are here to help them and in turn help themselves. Without them we would have a very difficult road indeed. They are our best friends and we wish to return the favor. This does not preclude the individual user, isolated without ready access to a Users group. Though we hope to put him/her with all Users groups or point him to local users nearby. Who knows? Maybe a new Users group could form.

6. A Quarterly publication to start in 1989 with an annual update of users and Users Groups (Sinclair Annual 1989). Other issues could contain specific info on the organization and possibly an index of published Sinclair related articles during that quarter. Any other submissions will be considered for publication.
7. Publication in the Quarterly Journal of a Calendar of events updated every three months to prevent possible overlap and conflicts of area events.
8. Organization of special interest subgroups such as a Beginners group, individual Disc Operated Systems groups, Pro-file and Mscript software groups for example.

9. Establishing a follow-up procedure for complaints to vendors.

Long term goals include a forum of interested parties to lead to standardization of hardware and software; making contact with and utilization of software bases in England and other parts of the globe; investigation of release into the public domain of information being held by authorized patent holders of Sinclair Technology; contact former software houses and cottage industries to release their rights and interests in programs no longer on the current market.

To prevent the idea that S.N.U.G. is "VAPORWARE - here in word only", the first order is to get the PDSL up and running. We have offers from some users groups and prominent individuals to donate their libraries. It is our goal to have every published program listing made available to members. We anticipate in the coming year to have the largest base of Sinclair specific software on the continent.

What does this all mean? This idea will not fly without your participation. If you do nothing to prolong the life of your computer now, then eventually there will be no support. Anything less is simply not feasible.

Mel Nathanson

Mail any/all correspondence (including sign up sheet) to:

S.N.U.G.

**SINCLAIR NORTHAMERICA
USERS' GROUP**

7515 Arbordale Drive
Port Richey, FL 3668

ATTN: Mel Nathanson

Current San Francisco Bay Area club S.N.U.G. members:

Peninsula User Group (PUG)
P.O. Box 1312
Pacifica, CA 94044

SINCLAIR USERS UNITE! Sing up for S.N.U.G.!

Sinclair/Tinex Northamerican Users Group is being formed. It will provide all of us with a unified voice to vendors, the latest product info, a list of other members, and the largest library of Public Domain and Shareware software in the United States. For more information fill out the sheet below.

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Work#: _____

Computer Equipment I own and peripherals are:

I would () would not () be interested in having a quarterly newsletter.

I would () would not () be interested in working on or submitting items for the newsletter.

Here is a list of some of the programs I have done that might interest other people:

Products that I would like to see for my computer are:

I subscribe to the following computer related publications:

Other user groups I belong to are: _____
(I've circled my local group)

I would () would not () like my name given to vendors at this time and other computer fests for future mailings. Software I am interested in either Public Domain, Shareware or Commercial is:

MERRY CHRISTMAS

VIEW FROM RAM-TOP

SSKKRREEEECCNN!

WOW! What month
is it? December!
Really? NO! It
couldn't be. I
just finished

eating my leftovers from Thanksgiving. Yes, it's now that time to open up all those mail-order catalogs, visit your local department store, and then go completely bankrupt for the rest of the year and the first part of the next. And this is what most Americans call "The Happy Holiday Season".

Seriously, with sales up and boosting this year, now is the perfect time to support your **TIMEXsinclair** and **sinclair** vendors. Latest releases from 1988 such as Pixel Print Professional by Lemke Software Development gives the T/S 2068 high quality desk-top publishing. Features like bank switching, 64 column printing, and availability for any disk format just can't be ignored. Bottle Cap Software has introduced Graphit-1, a first in a series of Information Charting programs. Battlestar Xemit and Start-Rek by UP Hosey both look promising as exciting games. For the QL, both hardware and software have jumped. Emsoft's new catalog lists business and financial titles, disk and programming utilities. Meta Media Productions provides one of the best smart terminal programs that supports Unarc, Uncrunch, Filters, etc. Digital Precision has announced an IBM emulator. They claim a 95% compatibility with IBM, PC clones, Compaq, and Amstrad. Also a hard-disc driver and interface is soon due. Of course, we can't stop here without mentioning the new arrival of the Cambridge 288 personal Laptop computer. It's definitely an "Uncle Clivey" original. The first in it's class. And finally the one gift that out does all others, **TIMEdesigns** **MAGAZINE**, the most comprehensive publication for all Sinclair oriented systems.

Either way you choose, you can not loose. So go ahead and buy that 2400 baud modem you've been drooling over, or decide on that disc drive you have been spinning in your head. And while your at it, pick up a program or two (one for the kids and one for you).

The Editors...

NOTE PAD

BY WILLIAM J. PEDERSEN

Sometimes you want to drop off a note to a friend, and you are forever forgetting the address. Perhaps you don't feel like a session with that word processor. Maybe you don't have one and the only printer you have is the T/S 2040.

Whatever the reason, here is a little program that can do a lot in the way of convenience.

You can enter all your favorite people into lines starting at 3001. Don't forget to index them in line 1700.

You put your closing in line 1901.

You can save all this in two copies using GO TO 4000.

Of course you have something different to say each time.

A template is provided as line 1850. Merely copy it as many times as you need as lines 1810 to 1847.

While you are writing, you can print to the screen. Once that meets your satisfaction, you can send it to your printer instead.

To erase a note, use DELETE 1810,1847. Then you can start a new one. You might want to add this as a program line, but most notes aren't so long.

There is also another template for your headings in line 3102.

One last thing. The program lets you make mailing labels.

```
1600 REM **** NOTE PAD ****
1601 REM (c)1985 W.J. Pedersen
1602 REM
1603 LET Who=3100: LET Where=2:
    LET Print=1801: LIST 1601:
    STOP
1608 REM
1610 REM This program is for
    casual notes and mail-
    ing labels if you don't
    want to keep a formal
    file.
1612 REM
```



```

1700 REM 3001 Pen Pal
      3100 Kermit the Frog
1715 REM
1716 REM ENTER: LET Who=????
1717 REM ENTER: Where=?
      ?=2 for screen
      ?=3 for printer
1718 REM
1719 REM The following is a
      heading..or label if you
      BREAK at the PAUSE 0.
      ENTER: GO TO print
1720 REM
1801 CLS : GO SUB Who: PAUSE 0
1802 REM
1804 REM Copy the template as
      often as needed for the
      text.
1810 PRINT # Where;
      This is where you write. Copy
      template from line 1850 as you
      need them. Watch your language.
1848 REM
1850 PRINT # Where;
1900 REM
1901 PRINT # Where;
      Respectfully yours,"
      Wonderful ME!"
1999 STOP : GO TO 1801
2000 REM
2998 Add your headings at
      1700 and here.
3000 REM
3001 PRINT # Where;"Pen Pal""AL
CATRAZ""Alcatraz Island, CA 773
40""Dear Birdy,""; RETURN
3100 PRINT # WHERE;"Kermit the F
rog""Star's Dressing Room""The
MUPPET SHOW""BOOBTOOB U.S.A.""
""Dear Kermie,""; RETURN
3102 PRINT # Where;"TEMPLATE""
""""""""Dear ?,""; RETURN
3104 REM
4001 SAVE "NOTE PAD" LINE 1
4003 SAVE "NOTE PAD" LINE 1
4005 STOP

```

LINKED LISTS

BY LT T. SWENSON

A linked list is a dynamic storage method used in a language like Pascal. It is designed to expand as the user needs it. This is not possible in BASIC, but there are some features of linked lists that can be useful in BASIC.

Let's say you have a list of names that you need to keep sorted. You will be adding to the list often. You do not want to spend the time to re-sort the list every time you add to it, but you still need to keep it sorted. Here is where a linked list comes in handy.

A linked list is a record that has essentially two parts. The first is the data. The second is a pointer to the next record. The pointer tells the computer where to look for the next record. Look at Diagram #1 to see how this works.

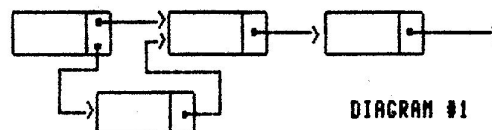


DIAGRAM #1

The way we will implement linked lists is to store the data in an array and have a pointer array that says "for record X the next record is at Y". Or in BASIC, pointer (X)=Y. Each new record will be added to the array in the next open position. The third record entered will be added to the array in the next open position. The third record entered will be in the third place in the array. There is also a ROOT pointer that tells us where the first record is. First meaning the first in the sort.

When we insert a record we only change the data in the record before it (by the pointer) and the new record. Look again at Diagram #1 to see how the pointers change for the two records involved.

Diagram #2 shows a before and after of the array as it is seen to BASIC. Note the data does not change, just the pointers.

	BEFORE			AFTER	
ROOT →	B	4	ROOT →	B	4
	A	1		A	1
	F	0		F	0
	C	3		C	5
				D	3

DIAGRAM #2

All four situations must be handled slightly differently. Each one has a comment before it in the program so you can see how each is handled. The program handles only inserting, but deleting can also be added to it. The program allows you to print out the sorted list to show you that it is sorted.

The process may look complicated, but it saves you a lot of time over sorting. A lot of times the most efficient method is fairly complicated.

Type in the program below to see how this works. It looks long and complicated, but it is

not. A lot of it is to take care of special situations. As you insert into the list four things can happen:

- 1) Linked list is empty.
- 2) New record is inserted at front of list.
- 3) New record is inserted at end of list.
- 4) New record is inserted someplace else (happens most often).

```

100 DIM stores$(20,10)
110 DIM pointerarray(20)
120 LET root = 1
130 LET count = 1
140 CLS
150 PRINT "1] Enter new string"
160 PRINT "2] Print out"
170 PRINT
180 INPUT "Enter choice : ";
    choice
190 PRINT
200 IF choice=1 THEN enterstring
210 IF choice=2 THEN
220     printout
230     PRINT
240     PRINT "Hit any key to
        continue"
250 PAUSE
260 END IF
270 GO TO 140
280 DEFine PROCedure enterstring
290 INPUT "Enter String : ";in$
300 LET pointernew = root
310 REMark ARRAY IS EMPTY
320 IF stores$(pointernew)="" THEN
330     stores$(count,in$)
340     root = count
350     pointerarray(count)=0
360     count = count + 1
370     RETURN
380 END IF
390 REMark IN$ IS BEFORE FIRST
    ENTRY
400 IF in$<stores$(pointernew)
    THEN
410     stores$(count) = in$
420     root = count
430     pointerarray(count) =
        pointernew
440     count = count +1
450     RETURN
460 END IF
470 REPEAT loop
480 LET pointerold = pointernew
490 LET pointernew =pointerarray
    (pointernew)
500 REMark REACHED END OF LIST
510 IF pointernew = 0 THEN
520     stores$(count) = in$
530     pointerarray(count) = 0
540     pointerarray(pointerold)
        count
550     count = count +1
560     EXIT loop
570 END IF
580 REMark REACHED PROPER PLACE
    FOR IN$

```

```

590 IF in$<stores$(pointernew)
    THEN
600     stores$(count) = in$
610     pointerarray(count) =
        pointernew
620     pointerarray (pointerold)
        = count
630     count = count +1
640     EXIT loop
650 END IF
660 END REPEAT loop
670 END DEFine
680 DEFine PROCedure printout
690 CLS
700 LET pointer = root
710 PRINT stores$(pointer)
720 LET pointer = pointerarray
    (pointer)
730 IF pointer = 0 THEN RETURN
740 GO TO 710
750 END DEFine

```

PUG'S NEWSLETTER EXCHANGE PAGE

BoSUG Sinclair/Timex Newsletter.....

JUST FOR FUN
Reset the QL and enter CLS 100.
Fun, huh? OK, reset the QL
again. Why doesn't it happen
with CLS 99 or CLS 101? I don't
know either.

CCAT/S USER GROUP The Plotter.....

Recently I read that the some
6000 computers inflicted with
virus were all of the type that
depends on the operating system
input by disk. It was the OS
that was stored on disk that was
contaminated. Our lowly TS
types with self contained OS
should be safe from this type of
virus (OS virus?).

LONG ISLAND SINCLAIR-TIMEX USERS L.I.S.T.ing Newsletter.....

Brooklyn Closeout Corp. has
confirmed that they still have
TIMEXsinclair 2068's for sale.
Bargin with them to get the best
price.


```

1988 Sep 17 14:37:06
flp1_ss88915a_lis
880915.1332; 557_WORDS;; (S)LIX
((S)inc(L)ink (I)nformation
E(x)change);;
(S)hareware_Article;;
Filename:: ss88915a
(sa88419a);;

```

HOW TO MAKE YOUR TIMEX SINCLAIR
COMPUTER COMPATIBLE WITH::
AMIGA, APPLE II, ATARI,
COMMODORE, CP/M, IBM,
MACINTOSH, & MORE...

First you need an Amiga,
Apple II, Atari, Commodore,
CP/M, IBM (or clone),
Macintosh, or other computer
with a serial port to use as a
File Server Computer..
These aren't hard to find. Look
around, you will probably find
one laying around the house
somewhere..
If not, maybe a friend has one,
or you can get someone to give
you one they are not using..
Only buy one as a last resort...

Next you need two things for
your Timex Sinclair::....

1. A serial port interface..
 - * The QL has a couple built in..
 - * The TS2088 may be able to use
the ones in the Timex Portugal
disk unit..
 - * The Spectrum may be able to
use the one in the Wafadrive
(although we suspect it is only
one way)..<
 - * For the TS1000, you can
probably buy or make one (This
is also an option for the
TS2088 and Spectrum). Some
people will tell you this isn't
to difficult (but they may not
tell you where to buy one or
how to make one)...

2. Some Software: This is the
subject of this article...

What does the software need to
do?..

At the very minimum it should be
able to::

- * Format a disc..
- * Get a Directory..
- * View a File on the TS
display..

These three items are pretty
easy to do by redirecting the
File Server Computer I/O as
demonstrated in 'QL to PC Clone
Cable & Test Program' Shareware
File (ts88726a) by Mark Wahl
and Terry Greenlee...

In addition, it must be able
to::...

- * SAVE a TS File (BASIC &
BYTES)..<
- * LOAD a TS File (BASIC &
BYTES)..<

This isn't so easy and is
probably where most of the
development effort will be...

Additional desirable features
would be::...

- * Print a File to the TS Printer
one sector at a time..
- * Manipulate an ASCII file a few
sectors at a time..

Some software will probably be
required for the File Server
Computer..

Hopefully this would be mostly
in BASIC with the routines that
need to be fast written in 'C'
(for portability) or in Machine
Code (Assembly)...

One question that needs to be
answered is 'What should this
software look like to the
User?'

We suspect it should be menu
driven, and the BASIC portions
(and the source code for the
'C' and Assembly portions)
should be written in a very
'readable' manner so that it
can be 'maintained' (customized
or changed) easily by the
user...

Mark Wahl is investigating 'C' &
88000 Assembly Source Code from
MINIX, MINIX messages on
USENET, AMIGA Shareware, & GNU
(GNU's Not UNIX) for use in
this project...

Mike Furman is working on an
RS-232 Interface design for the
TS1000 that should be adaptable
to the TS2088...

This seems to be an interesting
project since it would make the
TS Computers much more usefull
at an economical price and
provide an opportunity to learn
more about BASIC, 'C', and
88000 Assembly Language...

If you would like to help with
this project, contact::....

SincLink..
c/o Bill Miller..
(408)253-3175..
8675 Clifford Drive..
Cupertino, CA 95014-4530...

880915.0942;; ss88915a;; END....

1988 Dec 09 10:00:37
f1p1 s08812.lis
081209.0953;; words: 1041;;
(S)incink;; (W)newsletter;;
Filename: s08812 (s08812);;

Page 1:..
Sincink Newsletter..
Volume 4; Number: 12..
Dec, 1988...

Table of Contents:..
Page. Description (Filename,
BYTES)..
1. Sincink News 0812
(s08812.lis, 94937)..
2 Sincink Copyright Notice..
3 Disclaimer..
4 What is Sincink?..
5 What are the advantages of
'Subscribing' to Sincink?..
6 How do I 'Subscribe' to
Sincink?..
8011 SLIX Contacts (32)
(sc8811.lis, 25920)..
3. SLIX Newsletter Exchange 88
(127 months), 88107 Addresses
(s088.lis, 17330)..
4. Sincink Information 0812:..
5 LOOKING FOR TINES SINCLAIR
SHAREWARE SOFTWARE?..
6 TS PRODUCTS FOR SALE?..
7 LISTING TS USER GROUPS?..
8 NEWSLETTER EXCHANGE?..
9 Back issues of TIMELINEZ/
Sincink are available..
10 Sincink RENEWALS DUE...

8 (c) Copyright 1988 Sincink..
May be freely copied for non-
commercial use only. Please
give credit to author and
source. For commercial use,
contact Sincink,
408-253-3175...

8 Disclaimer: Sincink and
Authors disclaim responsibility
for the results of hardware
modifications to your computer
system..
If you are not SURE of your
capabilities, get someone with
more experience to help you...

8 What is Sincink?..
Sincink is the name of the
original publication of the
Group Using Times Sinclair of
Silicon Valley (GUTS/SV)..
Sincink was first published in
April, 1982..
Parts of Sincink are usually
printed in TIMELINEZ, the
publication of Times Sinclair
East Bay 280 User Group
(TSEB2UG), Times Sinclair
Peninsula User Group (TSPUG)
and GUTS/SV...

8 What are the advantages of
'subscribing' to Sincink?..
The purpose of all user groups
is to share information..
The best way to do this is thru
a newsletter, since most
members cannot attend every
meeting..
If you have a problem (or a
solution), the best way to ask
for help (or give help) is thru
the newsletter..
The newsletter also usually
contains information about
other User Groups around the
nation and world that we gather
thru our newsletter
exchanges...

8 How do I 'subscribe' to
Sincink?..
For User Groups (even small
ones- there is nothing wrong
with a one person User Group
that puts out it's newsletter
on a TS2040), we would prefer
to exchange newsletters on disk
(or paper if disk is not
available)..
If you just can't exchange
newsletters, the best way to
'Subscribe' to Sincink is thru
SLIX ((S)inc(L)ink
((I)nf(ormation) E(x)change)..
Send us some Sinclair related
information and we will send
you a current Sincink and a
'SLIX Contacts' printout with
your information in it so that
you can check it for accuracy
and suitability..
Mail exchange newsletters or
information (on disk or
paper) to:..
SLIX..
c/o Bill Miller, 408-253-3175..
4475 Clifford Drive..
Cupertino, CA 95014-4530..
You may also call your
information in to the telephone
number listed above..
The information will become part
of the Permanent SLIX Database
which will be made available to
all SLIX participants in as
many disk formats as we can
manage..
The preferred method for
exchanging information is as
ASCII text on 3.5in or 5.25in
floppy diskette using:..
88 MFM (Modified Frequency
Modulation- double density)..
88 80 or 40 cylinders..
88 (2) tracks (heads) per
cylinder..
88 (9) 512 BYTE sectors per
track..

The preferred disk formats (in
descending order of preference)
are:..
88 QL 3.5in, 720K..
88 QL 3.5in, 720K..
88 QL Cartridge or other QL Disk
Formats (Single Sided, 3in,
etc.)..
88 MS(PC)-DOS 3.5in, 720K
(Preferred Standard 3.5in)..
88 MS(PC)-DOS 5.25in, 360K
(Preferred Standard 5.25in)..
88 MS(PC)-DOS 3.5in, 1.44MB..
88 MS(PC)-DOS 5.25, 1.2MB..
88 C64/128 3.5in, 800K..
88 C64/128 5.25in, 340K..
88 Amiga 3.5in, 800K..
88 TS2068 5.25in, Larken 800K..
88 TS2068 3.5in, Larken 800K..
88 TS2068 5.25in, JLD 777K..
88 TS2068 3.5in, JLD 777K..
88 Macintosh 3.5in, 400K..
88 Macintosh 3.5in, 800K..
88 'NEXT' 254MB Optical Disk...

If you don't have a disk system
that can read and write any of
these formats, parts of
Sincink are available in
TIMELINEZ..
TIMELINEZ subscriptions are
available (\$15 Annually) from:
American Micro Connection..
408-270-9730..
2175 Aborn Road 0262..
San Jose, CA 95121...

If you absolutely MUST have most
of Sincink in printed form and
you already subscribe to
TIMELINEZ, subscriptions to
Sincink are \$10.00 per year..
If you do not subscribe to
TIMELINEZ, subscriptions are
\$15.00 per year..
Make check or money order
payable to:..
Sincink..
Mail to:..
Sincink..
c/o Bill Miller, 408-253-3175..
4475 Clifford Drive..
Cupertino, CA 95014-4530...

1988 Dec 08 18:04:21
f1p1 sc8811.lis
081208.1331;; words: 3352;;
(S)incink;; (C)contacts;;
Filename: sc8811 (s088) (1 Page
(File));;

SLIX Contacts 0811 (32):...

8 081130/GUTS/SV? Meeting;;
Attendees (4): Bill Miller;;
Mark Wahl;; Bob Kuster;; Terry
Greenlee..
88 Bill brought Sincink
Exchange Newsletters and
Contacts:..
888 sc8811 (7)..
888 sc8811 (31)..
888 sc8810 (11)..
888 sc8810 (34)..
88 Mark demoed the Save & Load
Patch for the QL 'Pay Check
Analyzer' Program (TIMELINEZ
0811 page 391)..
88 Bob brought the TS2068
Shareware and Commercial
Libraries. Thanks Bob!
He plans to copy the Shareware
Library to his JLD Disk System.
After that is accomplished, we
may be able to prevail upon him
to be the Shareware TS2068 JLD
Disk Librarian?..
Bob also promised to make us a
list of his Sinc and Syntax
Library..
Bob also reports (in answer to
Richard Matejovic's
081008.1617-1703 question
about a source for the 'Winky
Board II' TS1000 tape loading
aid) that they are still
available from: TS Vendor:
Russell Electronics;;
014-344-1325;; R01, Box 539;;
Centre Mall;; PH; 16820;;

((From: TIMELINEZ 0801 Page
98)..
He had some trouble with the
3.5in 720K Toshiba drive he was
using with his QL and sent it
back for head alignment, but
didn't get an RMA (Return
Merchandise Authorization)
number, and now it seems to be
lost..
He is using 3.5in Single Sided
drives that he bought for \$19
each..
Bob plans on attending the
PC UNIX 816 the first Wednesday
of the month at 7:00pm at AT&T
on Duane Ave. in Sunnyvale..
88 Terry gave a SHAREWARE FILE
WARNING!!; Filename: ts08726a
(rscable); Description: 'QL to
PC Clone Cable & Software by
Mark Wahl & Terry Greenlee'
(TIMELINEZ 0807-8 page 372 and
Sincink 0807-9 page 6) has
errors in the cable wiring
diagram!! DO NOT USE IT. It
could do permanent damage to
your computer. Terry has
promised to get us a correct
file..
Terry also promised to help Bob
learn to use his AT&T 7300,
UNIX, and 'C' Compiler...

8 081130.1725/Call from Mike
Furness..
Mike says he will not be able to
attend the GUTS/SV? Meeting
tonight..
He reports Bill Miller has been
purged from the LogOn/SV DOS
for not calling since about
0803. Mike volunteers to be a
'Pseudo' Bill Miller and keep
his active on the DOS. He will
keep a record of all messages

to him and attempt to answer
those he can. All he needs is
the password and access key..
Mike also says he will try to
work on the following projects
(6):..
88 List of all the items Mike
has borrowed from the Sincink
Library..
88 List (or at least quantity)
of all Mike's Times Sinclair
items not already listed in the
Sincink Inventory:..
888 Documents..
888 Magazines..
888 Books..
888 Software..
888 Hardware..
88 TS1000 RS-232 design and
prototype..
88 TS1000 user defined character
set..
88 TRS-80 CoCo Hi-Res Graphics
using the TM9918A.. 88
88 TRS-80 CoCo Read & Write on
MS(PC)-DOS 360K Disc under
TRS-DOS or OS-9..
Mike..
Thanks for volunteering to be
the 'Pseudo' Bill Miller. The
password and access key are
attached...

8 081128.2141/Call from Andy
Hradsky..
Andy says TIMELINEZ costs \$0.035
per page to produce..
At 14 pages to include Sincink
0810-11, this seems to be
within Sincink's \$1.25 per
issue budget..
It appears we can finance
TIMELINEZ fulfillment of
Sincink subscriptions out of
the Sincink account and still
have finances for the

Information Exchange,
Newsletter Exchange, and
Library Projects..
All we will need is a list of
Sincink subscribers to which
an issue of TIMELINEZ was
mailed to fulfill their
subscription and we can mail a
check for that fulfillment to
American Micro Connection..
8 081128.0952/Call from Bob
Kuster..
Bob reports he has a JLD Disk
System for his TS2068 and he
would like to back up the
TS2068 Public Domain Library to
his JLD System. We suggested he
get the library from Andy and
bring it to the 081130 Meeting
at the Cupertino Library...

8 081127/San Jose Mercury News
Computing Section Page 6F,
'Agenda'; Jack Davis;;
ACB-TEL-NUMB?;; 'Agenda'
Editor?;; 750 Ridder Park
Drive;; San Jose;; CA;; 95190..
Jack:..
Thanks for publishing the
information about the Times
Sinclair 816 of the Computer
Workshop meeting at Stanford
University every Saturday
Morning..
However, the Last Wednesday of
the month meeting of the Times
Sinclair Silicon Valley Users
was omitted. Hope you haven't
forgotten us and this was just
due to an oversight or lack of
space..
The item should read:..
Times Sinclair Silicon Valley
Users will meet at 7:00pm at

the Cupertino Public Library, 10400 Torre Ave., Bulletin Board Service (408)745-0880. Call Bill Miller at (408)253-3175.. Thanks again for the 'Agenda' section. Many users of many different types of computers depend on it to find out when groups of interest to them meet...

§ 081126/TCN TS 816 Meeting;; Attendees (8); Fred Waters;; Dick Delp;; Mark Wahl;; Bill Baker;; Howard Lebowitz;; Carl Linden;; ?; ?..

Topics:

§ 'How To Write An MS(PC)-DOS Disk'; by: Dick Delp;; Handouts: (9) Page Document & 320K Disk..

§ 'Tetris' an ASCII Graphics Game from Russia;; by: Fred Waters...

§ 081123/TSEB2UG Meeting?...

§ 081121.2243/Call from: Andy Wadesky..

Andy says he got (6) exchange newsletters & a letter from Ray Youngberg from George at the 081120 TSPUG Meeting.. Andy also reports he has a Legend 880 printer & Tascam 8 parallel Printer Interface FOR SALE for \$120. He has been using it with his TS2068 but is now using a Serial printer with his Portuguese Disk Drive System...

§ 081121/Letter from: Maurice O'Callaghan;; ACP-TEL-NUMB?;; PDB 1106;; P.C. Bidwell;; CA;; 96112..

Maurice found out about us from Computer! 0811 'Biscovieries' sent him by a friend who is into computers..

Maurice says that last summer he received a TS1000 (with 16K RAMpack) as part of a promotional package but with no manual..

He says he is not into computers, but would like to pass it along to a young neighbor..

He is looking for a source for a TS1000 Manual..

Maurice:

Thanks for the SAGE!..

We aren't in the business of selling TS1000 manuals (mainly because we can't replace them), but we do have a policy to loan items out of our library to subscribers for a deposit equal to the cost of the item plus a nominal Shipping and Handling Fee..

In the case of the TS1000 Manual, the cost would be:

§ TS1000 Manual;; \$10.95

(Refundable upon return within 30 days; 10% per month deducted from deposit or subscription after that)..

§ S & H;; \$2.00..

§ Total;; \$27.95..

Make Check or money order payable to..

Sincink..

Mail to..

Sincink..

c/o Bill Miller, 408-253-3175..

6675 Clifford Drive..

Cupertino, CA 95014-4530..

Hope this helps...

§ 081121.1434/Call from: Don Crane;; 408-756-7374 (work)..

Don contacted us some time ago about help for his children in college who have Amstrad Word Processors..

He is now looking for a source for 3in Diskettes and printer ribbons for them. He says Sears (where he bought them) disavow all knowledge of Amstrad..

He suggested: Bob Orrielt;; 415-369-9136,, since Bob also has an Amstrad Word Processor.. He also suggested: 'Electronic Express';; 214-247-4908,, since they advertised the 'Sinclair' (Amstrad) PC in Computer! 0810 (080916)..

He mentioned: Amstrad Vendor: Brice Road Pharmacy;; 614-361-3600;; 1653 Brice Road;; Reynoldsburg;; OH;; 43068;; from: ISTUG NL 8706 (070714) page 3 is listed as an Amstrad dealer in Computer Shopper 0812 page 298 'More Times Sinclair' Column..

We forgot to suggest: Sharp's;; 804-750-9697,, (at least for the 3in Diskettes)..

The 081128 'Best' Catalog Sheet Page 29 lists 'Smith Corona' Data Disk (3in?) for PWP3 Personal Word Processor: \$5.99..

American Micro Connection;; 408-270-9730,, may have 3in diskettes for sale..

Don promised to inform us if he finds someone who still supports the Amstrad Word Processor...

§ 081121.1027/Call to: Carl Rink..

Carl reports he just purchased an RS-232 interface and Avatec MODER for his TS2068 from Ed Gray. Also included is some software to make the RS-232 work. It is on 5.25in Disk in Larken Format..

Carl suspects he will need some help transferring it to 3.5in, and getting the whole thing to work with his Larken System..

He will be going into the hospital for surgery the first week in December and will probably be ready to attack the project at the beginning of January...

§ 081120/TSPUG Meeting;; Attendees (10); Rex Lundgren,, Bill Miller,, George Goodman,, George & Sonja Hockridge,, Kevin Leung,, Malt Johnson,, Bob Orrielt,, John Hancock & Andy Wadesky..

§ Rex showed the Theatrical Light Controller Project he has been working on. It is designed to be used with a computer, but he hasn't decided which one yet..

§ Bill brought the Sincink Exchange Newsletters and Contacts:

§§ sc8811 (3)..

§§ sc8811 (197)..

§§ sc8810 (11)..

§§ sc8810 (34)..

Bill also commented that 'Uncle Clive' seems to have solved the 'Bank Switching' problem that gave Times and Bill Pedersen so much trouble..

§ George Goodman tried out the 288 that Malt Johnson borrowed from: Malcolm McAffee;; 415-751-5305 (030421)..

§ George Hockridge brought the TIMELINE2 Newsletter Exchange Newsletters for:

§§ 0811? (7 + Letter from Ray Youngberg (sc881107)):

CATS NL 0811 (Bill) loaned George a 21-Appeal 0810 in exchange for the loan of this one)

12p1110

SLUG_NL 0811? 7 7777
? ? ? 7777
? ? ? 7777
? ? ? 7777
? ? ? 7777
? ? ? 7777
? ? ? 7777

Andy took (6 + the Letter) home..

George also suggested the TIMELINE2 Groups take up a collection for a \$15 Membership in SNUG..

§ Sonja helped collate

TIMELINE2 0811. She said she missed the job :-)..

§ Kevin reported he is TS 816 OP on the 'NetWare' BBS at 415-753-5265 (Answer 'VT52' to 'Type Terminal?' Question).

Kevin says he has his own seemingly unlimited file area (to which he has uploaded some TS2068 Software) plus access to 'Usenet' for 90.01 per minute..

§ Malt demonstrated the 288 he borrowed. He likes it so well he intends to buy one..

He demoed printing out files to a standard parallel printer using the 288 serial to parallel cable..

He has been using it for about a week to replace his TS2068 for his Hospital Chaplain duties and for keeping track of weddings at which he officiates..

He plans to use the Hospital PC's if he needs to save files to Disk or view them on a monitor..

He has already printed out some 288 files on the Hospital Laser Printer..

He has about 160K RAM in the 288 and still has about 77K free..

He says the batteries got so low the display started to have strange lines and spaces on it, but the data was still O.K. and he was able to replace the batteries without losing anything..

§ Bob Orrielt reported he got an Information Package from Bill Pedersen on TS2068 Bank Switching..

He also said he will look into providing a service to put TS1000/1500 and TS2068 programs in ROM..

§ John Hancock reported he has had a Mac+ for about a year, but he still uses about (10) TS1500's with ROMpacks in a music class he teaches..

§ Andy delivered TIMELINE2 0811 to the meeting..

§ George Hockridge traded a CATS 0810 Newsletter to Bill for a 21-Appeal 0810...

§ 081119/TCN TS 816 Meeting;;

Attendance (11)..

New Attendee (Introduced by Mark Wahl): Alan Hogue;;

408-757-7523;; 410 Horse Ave.;;

Sunnyvale;; CA;; 94086..

Alan has a Macintosh..

Topics:

§ 'Horology: The History and Mechanics of Time Keeping' by John Grass..

§ 'MS-DOS Disk Organization' by Dick Delp...

§ 081117.1442/Call from: Jerry (081115.1600);; 408-292-9343..

Jerry has (3) Kenotech items FOR SALE for the TS1000. He asked what we thought they were worth and we 'guesstimated' a price for each:

§ (2) 32K RAMpacks;; \$10-\$20ea.

§ (1) Centronics style printer interface;; \$20-\$40...

§ 081116/288 Catalog sheet from Cambridge Direct (081114);; 312-544-5512..

Ter: 'Timeline'...

§ 081116/Call from: Jack Davis

of the San Jose Mercury News..

Jack called to confirm the

Saturday meeting after

Thanksgiving..

He confirmed the meeting and

also told him that the BBS for

the Wednesday meeting is the

same as the BBS for the

Saturday meeting:

(408-745-0880)...

§ 081115.1423/Call from: Sherran

Lee (080513.1830);; 408-926-9381..

Sherran is looking for a TS2040

printer to buy. He suggested:

American Design Components

(080722);; 201-939-2710..

We also explained our policy of

loaning items from the Sincink

Library (we have (6) TS2040's)

to subscribers for a deposit

(refundable upon return) equal

to the price of the item (\$40

in the case of the TS2040)..

Sherran plans to attend the

Saturday meeting at Stanford...

§ 081115.1600/Call from: Jerry

at American Opinion Book

Store;; 408-292-9343.. Jerry

Computer Currents. He has some

TS parts FOR SALE and will try

to send us a list...

§ 081114/288 Catalog Sheet from:

Cambridge Direct;;

312-544-5512..

Similar to 081020...

§ 081114/Catalog, (16) pages

from: ENSoft;; Peter Hale?;;

617-889-0850;; Proprietor?;;

P.O.Box 8763;; Boston;; MA;;

02114-0763;; USA..

EN Software:

Price

5.25in Micro-

720K Drive

Description Disk Cart.

§ CAN Master dem 6.95 n/a

§ BLUTER 7.95 9.95

§ BDPProgs 9.95 11.95

§ BAdress 14.95 16.95

§ HELPER 14.95 16.95

§ BBTutor 19.95 21.95

§ MAILBAG 19.95 21.95

§ BLAND LORD 19.95 21.95

§ TAX-1-BL/88 19.95 21.95

§ TAX-1-BL/87 19.95 21.95

§ TRUST FUND 19.95 21.95

§ The Transfer_V3 89.95 89.95

§ Laches QL 119.95 119.95

§ CAN MASTER full

.....2850.00 n/a

21-01/TS1500 Software:

Description Cass-

ette

§ WORDS 19.95

§ WORDS 'personality

odule' for printer

Interface 19.95

§ AISORT 19.95

§ FILES 19.95

§ COPY8 19.95

..

Descriptions in BLIX files or

contact ENSoft directly...

§ 081114.1555/Call from: Roger

Solden;; 404-447-4251;; 5849

Poplar Street;; Doraville;;

GA;; 30340..

Roger found out about us from

Computer! 08117..

He reports he has had a TS2048

for about 4 years. He also has

the TS2040 printer and a speech

synthesizer. He got an Atari

800 XL System about a week

ago..
Roger also says that TS Vendor:
WJ Data Systems; 516-543-5252
(from Computer Bargain Line
No.1, Sept. 1988); now carries
the T82048 Technical Manual and
that he intends to get one..

Rogers:

Thanks for your interest. Hope
you decide to subscribe! If you
contact any of the TS User
Groups listed on page 7 of the
attached Sincink 0810-11, tell
us which ones are answering
their mail...

0 081113/Call from: Andy

Wradensky..

Andy reports a New User was born
to Stephanie and he is son!
Nov. 37. Congratulations!!
He also reports he thinks he can
get into the next TIMELINEZ..

Sincink 0810-11:

01 's0808.doc'..

000 Table of Contents..

000 Disk (Media) Exchange..

00 0810 SLIX Contacts (34)..

00 0809 SLIX Contacts (33)..

00 Maybe 's080.doc'?

01 Modified Records from

s080.doc:

000 'What is Sincink? What are
the Advantages of Subscribing
to Sincink? How do I
Subscribe to Sincink?..
000 'Back Issues of
TIMELINEZ/Sincink...'

Andy suspects that with the
present \$15/yr subscription
rate we can maintain the same
number of issues per year with
the same number of pages as in
the past..

A brief summation of past
TIMELINEZ issues follows..

(12) pages per year average..

00 1987; (10) issues; (92)

pages:

000 0712; (12)...

000 0710-11; (12)...

000 0708; (9); (8)...

000 0707-8; (8)...

000 0706; (8)...

000 0705; (8)...

000 0704; (8)...

000 0703; (8)...

000 0702; (8)...

000 0701; (12)...

00 1986; (8) issues; (72)

pages:

000 0611-12; (12)...

000 0609-10; (8)...

000 0607-8; (10)...

000 0606; (8)...

000 0605; (8)...

000 0604; (8)...

000 0602-3; (10)...

000 0601; (8)...

00 1985; (9) issues; (84)

pages:

000 0512; (10)...

000 0510-11; (10)...

000 0509; (8)...

000 0508; (10)...

000 0507; (8)...

000 0506; (8)...

000 0504-5; (10)...

000 0502-3; (10)...

000 0501; (10)...

00 1984; (12) issues; (94)

pages:

000 0412; (8)...

000 0411; (8)...

000 0410; (8)...

000 0409; (8)...

000 0408; (8)...

000 0407; (8)...

000 0406; (8)...

000 0405; (10)...

000 0404; (2)...

000 0403; (10)...

000 0402; (8)...

000 0401; (8)...

00 1983; (6) issues; (41)

pages:

000 0312; (11)...

000 0311; (10)...

000 0310; (10)...

000 0308-9; (10)...

000 0307-8; (12)...

000 0306; (8)...

Andy also reports he has

contacted: Ed Burton;

209-384-2399; 1611 Rose Ave.;

Merced; CA; 95340.. about

returning the Hufdrive and

Spectra? Ed borrowed from the

Hardware Library..

Andy needs the Hufdrive System

for a project he is working

on..

Ed says he is not using it and

will mail it back...

0 081112/TCN TS SIG Meeting..

Jin Howell reports the '68x

Group' meets the 2nd Wednesday

of the month at 7:30pm at

Donny's Restaurant on Downers

near Highway 101..

Topics: 'Information Sharing

Strategy' by Bill Miller..

01 Focus on ASCII Files..

01 Use UNIX type 'grep' and

'awk' programs for searching...

0 081110/Letter from: Glen

Watts; ACD-TEL-MUMB; 1255

Richelieu; Houston; TX;

77018..

Glen includes a BAGE. Thanks

Glen..

Glen's letter says..

'I am new. I have the computer..

I don't know anything..

Can you assist?..

Seen in magazine? 08 Nov. ..

I am interested in HAM and

science..

Thanks..

Glen..

Glen:

Did you find out about us from

Compute! 0811?..

We all were new when we started

out. TS computers are a good

place to start. Do you have a

TS1000, TS2048, or BL?..

We can help by trying to answer

any specific questions you

have..

We can also supply back issues

of TIMELINEZ/Sincink. They are

\$1.00 each. The 0412 issue has

an index to previous issues.

You may wish to order it

first..

We also have a Software Library,

a Hardware Library, and a

Document Library. Sincink

Subscribers may check out items

from these libraries for a

deposit (refundable) equal to

the price of the item plus a

nominal shipping and handling

fee..

For TS HAM info you may wish to

contact GIX. Their address is

on page 7 of the attached

Sincink 0810-11..

Hope this helps...

0 081110/Note to: Andy

Wradensky..

Andy:

Enclosed are (2) Sincink

0810-11 (Double Size) for

posting up into the next

TIMELINEZ..

Hope you have room for most of

this so we don't have to

publish a separate Sincink...

0 081107/Letter from: Jesse L.

Peeler (s08507p6);

ACD-TEL-MUMB; Apdo 186 -

Escazu 1250; Costa Rica;

Contranamerica..

Jesse encloses a BAGE with \$0.45

US Postage. Thanks Jesse..

Jesse asks about information on

the 'internally-mounted 64K

computers..

We are also interested in other

information on Hardware add-ons

with schematic diagrams..

Jesse:

We have enclosed the article

'Internal 64K RAM for the

TS/21' by: Tim Stoddard; C16

073127,264; 05-48 64th Road;

Rego Party; NY; 11374..

From: TIMEDESIGNS Magazine

0705-6 Page 27-28;

503-824-2650; 29722 Malt Rd.;

Colton; OR; 97017..

Hope this is what you are

looking for! Tell us how it

works out. For other

information on Hardware

add-ons, we have found

TIMEDESIGNS Magazine to be a

good source of information. You

may want to contact them about

ST; ZIPCD..

0 081005/Newsletter Exchange,

Sincink 0810, 14 Pages?;

GUTS/SV (Group Using Times

Sinclair of Silicon Valley);

Bill Miller; (408)253-3175;

Information Coordinator; 6675

Clifford Drive; Cupertino;

CA; 95014-4530; USA..

0 081021/Newsletter Exchange,

UPDATE Magazine 0810,

(80 Pages); UPDATE Quarterly;

Bill Jones; 904-871-4513;

Publisher; 1317 Stratford

Ave.; Panama City; FL;

32404; USA..

0 080826/Newsletter Exchange,

TIMELINEZ/Sincink 0807-8,

(16 Pages); GUTS/SV (Group

Using Times Sinclair of Silicon

Valley); Andy Wradensky;

(408)270-9730; Managing

purchasing back issues or

subscribing...

0 081107/Letter from: Ray

Youngberg; 513-890-4737; 6333

Freesport Drive; Dayton; OH;

45415..

Ray encloses a list of his

entire TS1000 and TS2048

Hardware, Software, Books,

Manuals, and Magazines FOR

SALE. Complete list in SLIX

Files, or contact Ray

directly...

0 081107/Catalog Sheet for 200

MacPac (0799) from: The

Marketing Clinic; Nigel

Searle; 603-352-9836;

POSITION; 16 Church Street;

Kenneb; NH; 03431; USA..

200 MacPac (0799) available

from: CAMBRIDGE North America/

SSI Computer Systems, Inc.;

207-741-3720; 424 Cumberland

Avenue; Portland; ME;

04101...

0 081105/TCN TS SIG Meeting;

Attendance: (15)...

Topics: 'Microsoft Windows' by:

Bick Belp; Based on an 08286

PC Clone...

0 081104.1234-.1241/Call from:

John Dick; 319-354-2320; 2120

S. Riverside Dr., Lot 819;

Iowa City; IA; 52244..

John wants to use a TS1000 in a

Controller/ Piano Tuning

Application. He asked about a

'TS1000 Memory Map'. We

suggested 'The complete XI-81

ROM Disassembly' by Dr. Ian

Logan and Dr. Frank O'Hara..

John is also interested in a

source for the TS1000 IRLA Chip.

We suggested Curry Computer,

1-802-478-2902; or Zebra

Systems, 718-291-2385..

Can anyone else help?...

0 081103/Letter from: Mrs. Doris

Bornstein; 213-431-1198;

12200 Monticello Rd., 3104;

Seal Beach; CA; 90740..

Mrs. Bornstein reports she has a

Digital Rainbow Version 2.0

Computer System she is

interested in donating to a

charitable organization..

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HAPPY COMPUTING.....THE EDITORS

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SUNNYVALE: MESSAGE BASE #17, PDSE LIBRARY ON DIRECTORY #50
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(408) 745-0000

SIG OP: PARK DOLL

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(408) 739-3977

SIG HOST: PARK DOLL

MEETINGS: EVERY SATURDAY MORNING AT 9:00 A.M.
STANFORD UNIVERSITY
JORDAN HALL (in the 0000)
ROOM 300C (downstairs)

DATES: DECEMBER 3, 10, 17, 24, 31, 1988
JANUARY 7, 14, 21, 28, 1989
FEBRUARY 4, 11, 18, 25, 1989

E B Z U C EAST BAY 280 USER GROUP
1619 GRANT STREET #6
BERKELEY, CALIFORNIA 94703
(415) 843-3587

HOST: JOHN EZIKE

MEETINGS: FOURTH WEDNESDAY OF EACH MONTH, 7:30 P.M.
WEST BRANCH BERKELEY PUBLIC LIBRARY AT
THE CORNER OF UNIVERSITY AND SAN PABLO.
BRING EQUIPMENT AND POWER STRIPS.

DATES: DECEMBER 28, 1988
JANUARY 25, 1989
FEBRUARY 22, 1989

P U C PENINSULA USER GROUP
311 RICHELLE LANE
DALY CITY, CALIFORNIA 94015
(415) 878-1773

PRESIDENT: GEORGE PACKRIDGE
HOST: DALT JOHNSON

MEETINGS: THIRD SUNDAY OF EACH MONTH, 1:00 P.M.
PENINSULA HOSPITAL
1783 EL CAMINO REAL
DURLINGAME, CA

DATES: DECEMBER 20, 1988
JANUARY 15, 1989
FEBRUARY 19, 1989

T S S U U TIMEXsinclair SILICON VALLEY USERS
6475 CLIFFORD DRIVE
CUPERTINO, CALIFORNIA 95014
(408) 253-3175

HOST: BILL MILLER

MEETINGS: LAST WEDNESDAY OF EACH MONTH - 7:30 P.M.
CUPERTINO LIBRARY
COMMUNITY ROOM
10400 TORRE AVENUE
CUPERTINO, CA 95014
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DOWN ACCESS RAMP
LEADING TO BOTTOM OF
CIRCULAR BUILDING

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FEBRUARY 22, 1989

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COMPUTER USERS' GROUP, INC.
5956 46TH AVENUE NORTH
SAINT PETERSBURG, FL 33709
(813) 546-4278

HOST: GENCE FEATHERMAN

MEETINGS: SECOND SATURDAY OF EACH MONTH, 7:30 P.M.
BENCH FEDERAL SOWINGS AND LOAN
7777 NORTH SETIMOLE BLVD.
SETIMOLE, FL

DATES: DECEMBER 10, 1988
JANUARY 14, 1989
FEBRUARY 11, 1989

Z88 Technical Specification

Design Four-chip design—CPU, ROM, RAM, gate array.

CPU Z80 (CMOS).

ROM 128K containing operating system and applications software together with BASIC/Assembler.

RAM 32K expandable via 32K, 128K, 512K and 1 megabyte to a maximum 3 megabytes, battery-backed from the computer.

EPROM Up to 3 megabytes removable storage capacity via 32K, 128K, 512K and 1 megabyte packs.

Applications software Pipedream word-processing and spreadsheet applications. Database. Calculator, diary, calendar, clock, alarms, printer editor, come as 'pop-down' screens.

Operating system OZ operating software, allows task-switching between applications without loading or exiting.

Language/Assembler Powerful BASIC.

Display 8 × 106 characters 'supertwist' LCD. Includes 8 × 80 working area, page map (shows where you are on a complete page), battery strength, alarm status.

Power 4 AA batteries provide 20 hours active computing or one year on standby.

Ports Three for memory-pack expansion, RS232 for popular printers and data import/export.

CAMBRIDGE

Z88

Z88 Accessories

RAM Packs Require no external power, and are available with 32K, 128K, and 512K capacity. 1 megabyte RAM packs available soon.

EPROM Packs Solid-state permanent storage, available in 32K, 128K and 512K. 1 megabyte EPROM packs available soon.

EPROM Eraser Z88 EPROM Eraser, completely deletes EPROM data—leaves you with a blank EPROM pack, ready for re-use.

PCLINK Consisting of software diskette and RS232 serial cable, allows transfer and receipt of ASCII files between the Z88, and an IBM or compatible PC. Also converts Z88 Pipedream files into either Wordstar or Lotus 1-2-3 files.

Links for other PCs available shortly.

Serial Printer Cable connects the Z88 to any printer with a standard serial port.

Parallel Printer Cable connects the Z88 to any printer with a standard parallel port.

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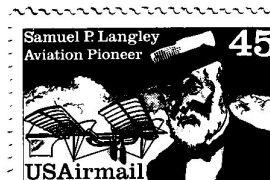
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